

RIIBEF202E

Identify and Rectify Site Operating Problems

Learner Guide Instructions

Who is this document for?

The learner.

What is in this document?

- Course training content (this matches the PowerPoint Presentation).
- Review questions.

What do you need to do before you use it for the first time?

1. Rebrand the document.
2. Review the document as part of your validation process.

See the 'Read Me First' document for a complete set of instructions on how to use these resources.



LEARNER GUIDE

RIIBEF202E Identify and Rectify Site Operating Problems

Learner Name:	
Learner ID:	
Learner Contact Number:	
Learner Email Address:	
Date Training Commenced:	

This Book Contains:

- Course Information.
- Review Questions.

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1.1 Introduction

This training course is based on the national unit of competency **RIIBEF202E - Identify and Rectify Site Operating Problems.**

This course will provide you with an overview of how to identify, rectify and monitor site operating problems by taking you through the following steps:

- ◆ Identify site operating problems.
- ◆ Assess the issues.
- ◆ Implement control measures to fix problems.
- ◆ Monitor the plant and equipment performance.
- ◆ Maintain plant and equipment performance.
- ◆ Record the issues, control measures and action taken.



Throughout these materials we use the following terminology:



- ◆ Operations: The tasks and activities that an organisation undertakes in order to meet the goals of the business.
- ◆ WHS: Work Health and Safety. The terms Occupational Health and Safety (OHS) and Work Health and Safety (WHS) are equivalent and generally either can be used in the workplace. The term WHS will be used throughout this training course.
- ◆ Worker: Replaces the term employee.

1.2 Working Safely

You must follow all safety rules and instructions when performing any work. If you are not sure about what you should do, ask your boss or supervisor. They will tell you what you need to do and how to do it in a safe way.



1.2.1 Health and Safety Rules

Every workplace has to follow laws and rules to keep everyone safe. There are 4 main types:

Rule	Explanation
Acts	Laws that protect the health, safety and welfare of people at work.
Regulations	Gives more details or information on particular parts of the Act.
Codes of Practice	Are practical instructions on how to meet the terms of the Law.
Australian Standards	Give you the minimum levels of performance or quality for a hazard, work process or product.

Some states use OHS laws, and other states use WHS laws. They both talk about the same thing, but use different words or names for people. If you have any questions about safety rules you should talk to your boss or supervisor.

To apply any of the requirements from any level (Acts, Regulations etc.) you must understand them. You need to be able to apply what is written relevantly to your work.

If you have any problems, difficulty or issues doing this, make sure you ask for assistance from appropriate personnel.



1.2.2 How to Keep Everyone Safe

WHS law says that all companies and workers need to keep themselves and other people safe while they work. This is called a duty of care.



To keep yourself and other workers safe you need to:

- ◆ Follow your instructions.
- ◆ Follow all workplace rules.
- ◆ Make sure all equipment is safe to use.
- ◆ Carry out your work safely.
- ◆ Report any problems.

Your worksite will also have instructions for working safely including:

- ◆ Emergency procedures, including using fire fighting equipment, first aid and evacuation.
- ◆ Handling hazardous materials.
- ◆ Safe operating procedures.
- ◆ Personal protective clothing and equipment.
- ◆ Safe use of tools and equipment.



If you think something is dangerous, tell your boss or supervisor as soon as possible.

1.2.3 Receiving Work Instructions

It is important to identify what work is being completed, and what your own tasks and responsibilities will be on site.

Work instructions and procedures can be communicated in the following ways:

Communication Method	Example
Daily Toolbox Talk or Pre-Start Meeting	The supervisor could assign each person their tasks for the day, what area they will be working in, what equipment they will be using, any hazards for example poor weather or other contractors working in the area, daily targets and take minutes of the meeting on a sign-on sheet for attendance.
Job Cards or Work Orders	Job cards could be created and issued to employees or contractors detailing the maintenance work required on a Forklift that is parked in the workshop for repairs.
Job Board	Management might put a board in the manufacturing workshop or processing plant with a list of tasks to be completed. Each task can be ticked off once they are completed to fulfil an order.

All workers on site must understand their own role and the roles of others before starting work. It helps to make sure work is done safely and efficiently.

1.2.4 Confirm Work Requirements

Make sure you understand the task before starting the work.

Even if you think that the instruction has been clear, taking a moment to review your understanding of the task can save time and errors from occurring later on.

Ways to confirm the work requirements may include:

- ◆ Asking questions to confirm understanding.
- ◆ Repeating the instruction in your own words.
- ◆ Highlighting key steps or safety controls on the work procedure or Job Safety Assessment.
- ◆ Reinforcing the major risks involved in the task and how to manage them.
- ◆ Clarifying who is responsible for the various steps or roles in the task.



Knowing your co-workers' needs and understanding how each other communicates best is a helpful strategy to ensure you all have the same understanding of what you will be doing.



Often tasks can involve multiple people or different work groups, your manager or supervisor may bring all of the team together for a short task briefing before getting started to help to coordinate the task.

Whilst completing the work changes may occur, such as changes in the process, identifying new risks or hazards, or changes to the work environment, such as the onset of poor weather, these may require you to pause, re-assess the risks and seek approval where necessary.

1.2.4.1 Communicating with Others

When communicating with others on site, make sure that you:

- ◆ Speak clearly and unambiguously – stick to the important details, don't waffle.
- ◆ Give instructions or directions so that they are easily understood.
- ◆ Provide complex information or explain issues to your listener in a way that ensures they understand. You could try breaking down the details, simplifying the information or referring to related examples.
- ◆ Listen carefully, answer questions and provide clarification as necessary. You can also ask questions to clarify understanding.
- ◆ Use all communications equipment appropriately, following the required procedures and protocols.



Make sure that you follow your site procedures and protocols for communicating on site. This may include using the correct processes for communicating work activities or exclusion zones to others on site.

Review Questions

1.	What information can you find in Australian Standards?	<input type="checkbox"/>

2.

What are two (2) ways work requirements may be communicated to you?



1.

2.

3.

What are three (3) ways you can confirm your work requirements?



1.

2.

3.

4.

Why is it helpful to know your co-workers needs and how each other communicates best?



1.3 Site Policies and Procedures

Understanding and following the site policies and procedures will help you understand how vehicles, plant and equipment on site are expected to function and the hazard controls in place to ensure work is completed safely. If you are not sure about what to check to ensure vehicles, plant and equipment are performing correctly, ask your boss or supervisor. They will tell you what you should check for and how to perform your work tasks in a safe way.



1.3.1 Site Operational Plans

Operational plans provide you with a better understanding of the work and processes on site by outlining the way tasks are completed on the work site. Timeframes, objectives, resources and duties of personnel on site will all be detailed in the site operational plan.

They may be broken down into smaller documents addressing specific topic areas such as:

Site Details

The information and safety requirements of the workplace environment (where you will be working).

Hazard Details

Any hazards in the work area or related to the work. This could also include instructions on how to handle dangerous or hazardous materials.

Task Details

Instructions of what the work is or what you will be doing (this can include diagrams or plans). Also instructions on how to safely do the job.

Faulty Equipment Procedures

Isolation procedures to follow or forms to fill out.

Signage

Site signage tells you what equipment you need to have, or areas that are not safe to be in.

Emergency Procedures

Instructions on what to do in emergency situations, for example if there is a fire, accident or emergency where evacuation or first aid is needed.

Equipment and Work Instructions

Details of how to operate plant and equipment and the sequence of work to be done.



The operational plans are often may be presented as a table which displays any tasks, and actions and other important information. They may be displayed on noticeboards or in meeting rooms as a visual reminder for people on site.

Operational plans may be stored electronically on company intranet pages or shared intranet drives.

Before starting your work you need to make sure you have access to all operations documentation for the job. This will help you to do your work in the safest way and make sure all work is compliant.

If you are not sure where to find the site operational plans ask your manager or supervisor, they will be able to show you where to find them.

1.3.2 Communication Procedures and Systems

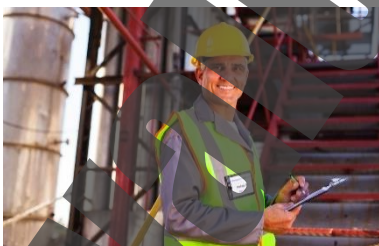
Procedures that relate to communication systems and equipment focus on the correct use of equipment and systems in each situation. This focus aims to avoid incidents caused by poor communication, misunderstandings or using the equipment incorrectly.

Safety procedures for communication equipment and systems includes:

- ◆ Equipment maintenance – guidelines on keeping communication equipment operating properly.
- ◆ Equipment use – rules around how, when and where you can use equipment.
- ◆ Guidelines or instructions around communication equipment that is not allowed to be used. In some cases you may not be allowed to use mobile phones on work sites or in certain areas.
- ◆ Fault reports – to warn other personnel of dangerous or faulty equipment.
- ◆ Hazard reports and risk assessments – identified unsafe situations need to be documented and managed in the right way to keep everybody safe.



Check with your supervisor or other authorised and experienced personnel to see if there are any safety requirements for any communication equipment you need to use.



Before you use any communication equipment make sure:

- ◆ You are using the right method of communication for the situation.
- ◆ The equipment is in good condition and works properly.
- ◆ You know how to operate it properly.
- ◆ Other workers you are communicating with know what you are doing and what equipment you are using.
- ◆ Other workers will be able to understand what you are telling them with the communication equipment.
- ◆ The equipment will not cause any hazards, incidents or unsafe situations for yourself and other personnel in the area.

Operate all equipment in line with workplace rules, policies, procedures and instructions. For example, you may need to use specific call signs and voice procedures, or include specific details in written documents and emails.

Communicate clearly and give direct and prompt directions or responses to other personnel while you work. This will keep everything running smoothly and make sure everybody understands what is going on.

If an unexpected situation occurs that is caused by the way you are operating the communication equipment you should stop and assess the situation. Talk to other personnel and work out how you will communicate and what equipment you will use for the remainder of the work.



1.3.3 Operator Procedures to Confirm Plant and Equipment Safety



Equipment operators can be the first line of defence in identifying plant and equipment problems especially if they are regular users of the specific equipment.

A change in sound for example the squealing of a bearing or a change in the way a piece of equipment feels when driving on the road, or a puddle of oil underneath a parked piece of earthmoving equipment may be an indicator of a problem occurring.

Waiting for equipment to fail can be costly and significantly impact production and safety, particularly if spare parts are not readily available. However, many problems can be easily rectified if found and dealt with quickly.

An operator should be able to identify and diagnose common problems associated with the vehicle, plant and equipment they are using. They can be well prepared to do this by following the procedures listed below:

- ◆ Refer to the operating manual.
- ◆ Check the equipment logbook.
- ◆ Familiarising themselves with the piece of equipment.
- ◆ Learning of any alarms or warning indicators for equipment malfunctions.
- ◆ Ensuring they have received adequate training to use and maintain the equipment.
- ◆ Use inspection forms that tell you what to look out for that are specific to the equipment.
- ◆ Use tools designed to identify issues such as temperature guns to check bearing temperatures.
- ◆ Set alarms or triggers to help flag when something isn't operating correctly.
- ◆ Keep services and calibrations up to date.



If you feel like something isn't right or you are unsure, ask someone. Supervisors, managers, maintenance providers and equipment manufacturers are all sources of information who can help to diagnose an issue.

The sooner you identify an issue the less likely it is that further damage will occur. If in doubt, stop and ask.

1.3.3.1 Routine Checks

Before using any vehicle, plant or equipment the operator must complete routine checks to make sure it is safe to use and functioning how it should.

Routine checks are made up of:

- Pre-Start Checks**
Visual checks done before you start the equipment.
- Operational Checks**
Checks of all functions once the machine has been started.

Generally, routine checks are performed at the start of each day or shift.

The operator should follow site procedures to complete these checks, this may include an inspection checklist to keep a record of which checks have been made.

Pre-Start Checks

Pre-start checks are done before the vehicle, plant or equipment is used. The operator will visually check equipment by holding it in their hands and checking for any obvious faults, or for large plant and equipment they may walk around and look for anything that is out of the ordinary.

Check the operator's manual for exact details on the components for the vehicle, plant or equipment being used, as different machines have different requirements.



Operational Checks



Operational checks are made once the vehicle, plant or equipment has been started.

The operator will check all controls and functions of the vehicle, plant or equipment in accordance with site and manufacturer requirements.

Unusual noises or functional issues will be identified and addressed at this point.

1.3.4 Applying Policies and Procedures

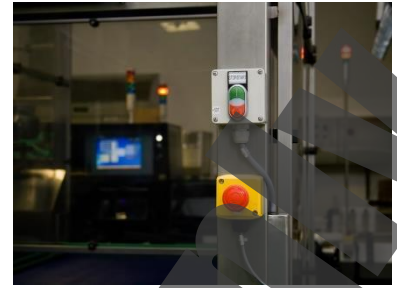
As site policies and procedures can vary from state to state, company to company, and job to job, you need to familiarise yourself with the documentation that applies to your work area and situation.

Working safely and effectively is your responsibility and checking those around you understand and follow site policies and procedures is another way of increasing your own safety level.



In high risk work environments, you should also ensure:

- ◆ All materials, tools and equipment are properly maintained.
- ◆ All emergency access points are kept clear.
- ◆ Procedures and equipment are known and usable.
- ◆ Regular familiarisation is carried out for contingencies and emergencies.



You must apply the site policies and procedures throughout every stage of work from planning, to closing off the job.

Review Questions

5.	What will an operation plan provide you with?	<input type="checkbox"/>
6.	Where might an operational plan be displayed?	<input type="checkbox"/>

7.

List four (4) things that may be included in 'operations documentation'.



1.

2.

3.

4.

8.

What are three (3) ways you can identify equipment issues?



1.

2.

3.

9.

What are routine checks made up of?



1.4 Site Operating Problems

Site operations don't always go to plan. Site operating problems can range from significant issues that may stop entire site operations for days, weeks or even months to more minor issues that you could quickly fix using on-site resources.

Operational issues may result in:



- ◆ A complete failure of the plant, equipment or process. For example, The complete failure of a conveyor tail bearing leads to the plant's shutdown until you can locate a replacement.
- ◆ A partial failure, where although the equipment continues to operate it doesn't reach its intended performance. For example, underfeeding a conveyor or running it slower than intended leads to reduced production output.

Understanding the operational processes for vehicles, plant and equipment on site is the first step in identifying a problem. This is because you need to understand how vehicles, plant and equipment are expected to perform in order to identify an abnormality occurring due to a malfunction or fault.

1.4.1 Use Site Policies and Procedures to Identify Problems

The policies and procedures relevant to the work completed on site provide guidance about how equipment is expected to perform when being used, and also indications of a malfunction or fault.

Policies or procedures are beneficial for the task of identifying and rectifying site operating problems because they assist operators and workers with understanding the equipment they are using. These benefits can be classified into several categories which are detailed below:



Example	Benefit
Safe work procedures can be used to train new operators in the safe operation of a piece of plant or equipment.	Competence – increasing the skill and level of expertise an operator has which will improve their familiarity with the plant or equipment. The more familiar an operator is with their equipment or plant, the more likely they are to notice if it is performing abnormally due to a malfunction or fault.
Manufacturers specifications will provide information on the expected rate of performance for the plant or equipment being used.	Productivity - understanding the expected rate of performance will assist with creating goals and timeframes for the completion of the work. If the goals or timeframes are not met it may be an indication of a malfunction or fault with the equipment.
Work specifications will explain the expected standard of work to be performed using the plant and equipment available.	Quality – understanding the required standards of work will assist with determining if the equipment is performing as intended. If the equipment is set to all the recommended settings to achieve the specifications for the work and it is not performing correctly then it may indicate there is a problem.

1.4.2 Operating Characteristics and Limitations

It is important that you understand the characteristics and limitations of any vehicles, plant or equipment used. This will minimise the chance of it being used in a way that is dangerous or may result in damage.

Be aware of the duration and intensity of the work that is being completed using plant and equipment and make sure that you do not use it in a way that exceeds manufacturer recommendations.



The operating characteristics of site processes, plant and equipment will be detailed in your workplace procedures and the manufacturer instructions.

Examples of operating characteristics may be:

Characteristic	Description	Example
Capacity	The safe maximum load on a piece of equipment or system.	The weight a dump truck is engineered to carry.
Efficiency	The ratio between the work (input) and results (output) of a system.	The quarry improved its efficiency by decreasing the gradient of the haul road, enabling the trucks to use less fuel (less work) for the same distance of travel and improve their cycle times (better result).
Reliability	The ability of plant, equipment or systems to consistently perform their required functions without degradation or failure.	The continuous mining machine needs to work without breaking down in order to meet the production schedule of the mine. Its reliability is critical to meeting the mining schedule.
Adequacy	Assessment to decide whether the equipment or process is good enough to meet the requirements.	Is there an adequate amount of rock feed from the blast on the ground to keep the crusher running without running out?

The characteristics of equipment may be measurable, this can assist with tracking their performance over time by reviewing current performance, to the same time the day before you can identify if there are any abnormalities. Words you may hear on site to describe measurable characteristics include:

- ◆ Flow.
- ◆ Current.
- ◆ Density.
- ◆ Levels.
- ◆ Restrictions.
- ◆ Air flows.
- ◆ Pressure.
- ◆ Speed.
- ◆ Temperature.
- ◆ Unusual noises.
- ◆ Vibrations.
- ◆ Power.
- ◆ Corrosion.

